REMARKS

Careful consideration has been given by the applicants to the Examiner's comments and rejection of the claims, as set forth in the outstanding Office Action, wherein the Examiner has set forth new grounds of rejection under 35 U.S.C. §103(a), predicated on the previous amendments.

Concerning the rejection of the claims, applicants note that Claims 1-10, 13, 14 and 16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Belli et al., which was cited by applicants in an Information Disclosure Statement (IDS), in view of Saunders, et al., as also cited in the IDS, as detailed by the Examiner with regard to each particular claim.

However, upon careful consideration of the art, as represented by the combination of Belli, et al. and Saunders, et al., applicants note that the claims, as amended and presented herein, are clearly and unambiguously directed to patentable subject matter.

In particular, applicants note with respect to Saunders, et al. that this reference apparently discloses that clamping elements based on being wedged in a recess in order to effect clamping. However, applicants respectfully take issue with the Examiner in that point, particularly the embodiment of Figure 2 of Saunders, et al., wherein the clamping elements 16 and 17 are not wedged towards the "left side" represented by the electrode 4, but rather are fixed to the electrode 4. In this connection, applicants draw the Examiner's attention to Column 3, Lines 16-19, wherein it is stated that "the spring clips 16 and 17 are beryllium-copper and are attached to the electrode 4." Consequently, in order to more succinctly and clearly distinguish over this particular aspect, applicants have herewith incorporated Claims 7 and 8 into Claim 1, wherein it is indicated that "the clamping elements 6 are in each instance or case formed by an angled spring, and in particular, an angled leaf spring, comprising the clamping arm (6a) and a base arm (6e), wherein the base arm (6e) is wedged between the sidewalls of the recess (8)".

The foregoing structure and function is in no manner ascertainable from or suggested by either of the references of record, irrespective as to whether Belli, et al. is combined with the disclosure of Saunders, et al.

In particular, applicants note that although the combination of these publications comprise basically a target support structure, there are major distinctions with respect tot eh present invention.

In particular, having reference to Saunders, et al., the target which is parted in segments comprises a sputter cathode, which is permanently bonded to a metallic backing plate, and possesses a coefficient of thermal expansion, which is similar to that of the target. The backing plate is maintained in a removable matter from the remaining structure through the intermediary of the elastic spring clips contacting the electrode. These clips are elastically deformable and also thermally conductive, whereas one end of each of the spring clips is attached to the electrode.

As indicated and clearly evident from the structure of the prior art publications, as shown also in Figure 2 of Saunders, et al., the disadvantage resides in that the spring clips must be fixed to the electrode by means of laser point welding or the like, and in the event of a jamming up or sticking of the target segments in the backing plate on the electrode, it is possible that the spring clips can readily break off and must again be welded or bonded in place. This clearly indicates that the spring clips can be readily lost or displaced since they are not maintained in a recess, so as to be readily accessible, but are freely and openly located on the electrode, and thus, able to readily drop off and be displaced and permanently lost.

In contrast with the foregoing, pursuant to the present invention, there is provided a target support assembly structure for removable splicing of a target with the target support assembly including holders which maintain the structure in a captive or enclosed location secured against

potential loss, and to provide a simpler attachment to the target support assembly, in contrast with the prior art, as represented by Belli, et al. and Saunders, et al.

In order to solve the foregoing problem, the target support assembly, according to amended Claim 1, which now incorporates the limitations of cancelled Claims 7 and 8, clearly provides for that the clamping element (6) in each case is formed by an angled spring, particularly an angled leaf spring, which includes a clamping arm (6a) and a base arm (6e), and in which the base arm (6e) is wedged between the sidewalls of a recess so as to be prevented from possible loss of the springs.

An important advantage of the present invention resides in that the clamping elements are fixed without necessitating any further assembly and/or in the absence of requiring any complex methods for fixing the latter, which would require an intensive amount of labor, thereby saving appreciable costs in comparison with welding or bonding as required by the state of the technology.

With regard to the prior art, the clamping elements of the target support assembly according to the invention, are in contrast more sturdily built-in structure due to their essentially more compact configuration and, thus, cannot easily break off, unlike the delicate prior art springs.

Moreover, the contact surface of the clamping elements based on the target carrier 2, 3 of the present invention is larger in size than the essentially punctiform bonding provided for by Saunders, et al. Consequently, the probability of encountering any damage and/or of losing the holder structure is much lower pursuant to the target support assembly as set forth and claimed herein.

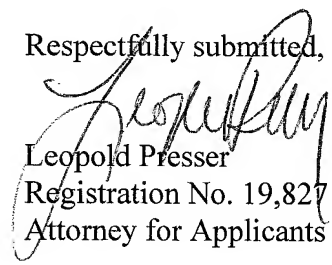
Moreover, the inventive clamping elements are suitably protected against any breaking off, inasmuch as they are essentially concealed within and wedged in a recess structure (8), unlike the exposed spring clips 16, 17 in Saunders, et al. The foregoing is clearly evident from the holding means shown in Figure 2 of Saunders, et al., as contrasted with the holding means in Figures 4 and 5 of the present target support assembly, as set forth and claimed herein.

Furthermore, additional important distinctions are present between the target support assembly of the invention and in the prior art, as represented by Belli, et al. and Saunders, et al., inasmuch as in the present invention, the target is cylindrically configured; whereas in contrast, the target pursuant to the prior art is flat in its surface configuration. Consequently, it is difficult to construct a target support assembly according to both the base of Belli, et al. and Saunders, et al. Moreover, the target sleeve pursuant to the present invention is not constructed as it is in Saunders, et al. or Belli, et al. Additionally, the target as set forth in Saunders, et al., upon being exhausted or depleted, requires a change of jointly the target and the backing plate as a single component, inasmuch as the target is permanently bonded to the backing plate, having also reference to the Abstract in Saunders, et al. In contrast, the target of the present apparatus is removable from the carrying sleeve, and thus, is simpler to replace and less expensive as to both costs in labor and replacement parts.

Inasmuch as the claims have been amended to clearly emphasize the foregoing patentable distinctions over the art, irrespective as to whether Belli, et al.. or Saunders, et al. is considered singly or in combination, the early and favorable reconsideration and allowance of the application, as amended, is earnestly solicited. In this connection, applicants, by way of information, submit that the corresponding European patent application, EP 1518006 B1 has been allowed with essentially the original claims, wherein the European Examiner also cited Belli, et al. and Saunders, et al. as representative of the state of the art.

In the event that the Examiner has any queries concerning the instantly submitted Amendment, applicants' attorney respectfully requests that he be accorded the courtesy of possibly a telephone conference to discuss any matters in need of attention.

Respectfully submitted,



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